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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/628,942

07/29/2003

Gerardus G.P. Van Gorkom

PHN 16,984A

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04/19/2006

EXAMINER

WU, XIAO MIN

PHILIPS INTELLECTUAL PROPERTY & STANDARDS

P.O. BOX 3001

BRIARCLIFF MANOR, NY 10510

ART UNIT

PAPER NUMBER

2629

DATE MAILED: 04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/628,942

Applicant(s)

VAN GORKOM, GERARDUS G.P.

Examiner

XIAO M. WU

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 8-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 8-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 19, 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Stern (US Patent No. 5,771,321).

As to claim 19, Stern discloses Stern discloses a display device comprising: a light guide (12, Fig. 4A, 4B); a moveable element (28); and selection means to locally bring the movable element into contact with the light guide (see Figs. 4A, 4B, and also see col. 11, line 58 to col. 11, line 2). Stern further discloses an anti-adhesion layer (e.g. transparent form of Teflon, see col. 13, lines 36-37 or the element 54 as shown in Fig. 4B) on the side at which the contact is made between the movable element and the light guide.

As to claim 21, Stern discloses the movable element is electrically conducting and at a fixed potential (col. 13, lines 3-12).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2629

4. Claims 1, 3, 5, 10-11, 13-15 and 22 rejected under 35 U.S.C. 103(a) as being unpatentable over Stern (US Patent No. 5,771,321)

As to claims 1, 11, 22, Stern discloses a display device comprising: a light guide (12, Fig. 4A, 4B); a moveable element (28); and selection means to locally bring the movable element into contact with the light guide (see Figs. 4A, 4B, and also see col. 11, line 58 to col. 11, line 2). It is noted Stern does not specifically disclose the moveable element is situated in an evacuated space below 0.1 atmosphere. However, Stern discloses that in operation of the mechanical taps, they also provide an escape route for any air trapped between a tap beam and either the light storage plate or the viewing substrate as the tap beam is actuated toward the plate or substrate. The holes are preferably of such a small size in relation to the overall tap beam size that they do not impact the mechanical properties of the tap beam (col. 41, lines 40-46). In other words, there is no air being trapped in the space so that the air space between the light guide and the moveable member would be maintained in a low-pressure condition. Thus, it would have been obvious to one of ordinary skill in the art to have realized to maintain the space in a lower pressure so that the moveable member can be moved up and down more easily. The number of the atmosphere is considered as an obvious design choice since it might depend on the size and weight of the movable member and the voltage required to move the movable member.

As to claim 3, Stern discloses the substrate electrodes counteracts the static force and cause the tap beam to flex upward against the viewing substrate stand-offs (col. 13, lines 45-52). It would have been obvious to a person of ordinary skill in the art to remove or counteract or to prevent a static charge from the movable element because doing so would prevent fluctuation of the display due to static charge and thereby improve display quality.

As claims 5, 14, Stern discloses the light guide is provided with anti-adhesion layer (e.g. transparent form of Teflon, see col. 13, lines 36-37) on the side facing the movable element.

As to claim 10, Stern discloses the movable element is arranged between the light guide and a further element (54), and the selection means comprises means for locally generating a force causing the movable element to move toward the light guide as well as a force causing the movable element to move towards the further element (see Figs. 4A, 4B).

As to claim 13, Stern discloses the movable element is electrically conducting and at a fixed potential (col. 13, lines 3-12).

As to claim 15, Stern discloses a surface of the movable element facing the light guide is a same material as a surface of the light guide facing movable element (e.g. they both are transparent material).

5. Claims 2, 4, 8-9, 12, 16-18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stern (US Patent No. 5,771,321) in view of Adachi et al. (US Patent No. 5,631,664)

As to claims 2, 12, 20, Stern discloses Stern discloses a display device comprising: a light guide (12, Fig. 4A, 4B); a moveable element (28); and selection means to locally bring the movable element into contact with the light guide (see Figs. 4A, 4B, and also see col. 11, line 58 to col. 11, line 2). Stern further discloses the selection means comprises electrodes (e.g. electrodes 60, 62, 64, Fig. 4E) and , in operation, the movable element (28), provided that is in contact with the light guide, contacts the light guide, thus causing light to be emitting through the movable element. It is noted that Stern does not discloses that the electrode is transparent electrode and the light is transmitted through the transparent electrode. Adachi is cited to teach a

Art Unit: 2629

display device including transparent electrode (col. 3, line 22) and an electrical light emitted portion caused light emitted portion to selectively emit light through transparent electrode (col. 3, lines 35-39). It would have been obvious to one of ordinary skill in the art to have modified Stern with the features of the transparent electrode so that the transparent electrode can be placed on the surface of the movable element at the light emitted portion without blocking the light.

As to claim 4, Stern discloses the movable element is electrically conducting and at a fixed potential (col. 13, lines 3-12).

As to claim 8, Stern discloses that there is no liquid between the movable element and the light guide (e.g. Stern discloses that the air is filled between the movable element and the light guide).

As to claims 9, 18, it is noted Stern does not specifically disclose the moveable element is situated in an evacuated space below 0.1 atmosphere. However, Stern discloses that in operation of the mechanical taps, they also provide an escape route for any air trapped between a tap beam and either the light storage plate or the viewing substrate as the tap beam is actuated toward the plate or substrate. The holes are preferably of such a small size in relation to the overall tap beam size that they do not impact the mechanical properties of the tap beam (col. 41, lines 40-46). In other words, there is no air being trapped in the space so that the air space between the light guide and the moveable member would be maintained in a low-pressure condition. Thus, it would have been obvious to one of ordinary skill in the art to have realized to maintain the space in a lower pressure so that the moveable member can be moved up and down more easily. The number of the atmosphere is considered as an obvious design choice since it might depend on

Art Unit: 2629

the size and weight of the movable member and the voltage required to move the movable member.

As to claim 16, Stern discloses the movable element is arranged between the light guide and a further element (54), and the selection means comprises means for locally generating a force causing the movable element to move toward the light guide as well as a force causing the movable element to move towards the further element (see Figs. 4A, 4B).

As to claim 17, Stern discloses a surface of the movable element facing the light guide is a same material as a surface of the light guide facing movable element (e.g. they both are transparent material).

Response to Arguments

6. Applicant's arguments filed 10/1/2005 have been fully considered but they are not persuasive.

With respect to claim 1, applicant argues that Stern does not teach that the movable element is situated in an evacuated spaced below 0.1 atmosphere. This argument is not persuasive because Stern discloses that in operation of the mechanical taps, they also provide an escape route for any air trapped between a tap beam and either the light storage plate or the viewing substrate as the tap beam is actuated toward the plate or substrate. The holes are preferably of such a small size in relation to the overall tap beam size that they do not impact the mechanical properties of the tap beam (col. 41, lines 40-46). In other words, there is no air being trapped in the space so that the air space between the light guide and the moveable member would be maintained in a low-pressure condition. Thus, it would have been obvious to one of ordinary skill in the art to have realized to maintain the space in a lower pressure so that the

moveable member can be moved up and down more easily. The number of the atmosphere is considered as an obvious design choice since it might depend on the size and weight of the movable member and the voltage required to move the movable member.

With respect to claim 2, applicant argues that there is no suggestion in Stern to use transparent electrodes in a contact-based display and there is no suggestion in Adachi to use Adachi's transparent electrodes in a display system that uses an entirely different technology and entirely different principle of operation. These arguments are not persuasive because it is well known in the art to use transparent electrode instead of the metal electrode since the transparent does not block the light passing through. It would have been obvious to have used the transparent electrode to replace the metal electrode of Stern at the location of the light emitting portion without blocking the light.

With respect to claim 19, applicant argues that Stern is silent with regard to the desirability of an anti-adhesion layer on the movable element or on the light guide. This argument is not persuasive because Stern discloses an anti-adhesion layer (e.g. transparent form of Teflon, see col. 13, lines 36-37 or the element 54 as shown in Fig. 4B) on the side at which the contact is made between the movable element and the light guide.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

Art Unit: 2629

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to XIAO M. WU whose telephone number is 571-272-7761. The examiner can normally be reached on 6:30 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, RICHARD HJERPE, can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

x.w.

April 16, 2006


XIAO M. WU
Primary Examiner
Art Unit 2629